

Nilai rerata vascular pedicle width vpw vascular pedicle cardiac ratio vpcr vascular pedicle thoracic ratio vptr dewasa normal Indonesia studi di Rumah Sakit Cipto Mangunkusumo = Mean value of vpw vpcr vptr of Indonesian adult study at Cipto Mangunkusumo Hospital

Rommy Zunera, author

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Abstrak

[<b>ABSTRAK</b><br>

Latar Belakang : pengukuran VPW dari modalitas foto toraks merupakan pemeriksaan yang non invasif, cepat dan mudah untuk memprediksi kondisi hipervolemia. Namun belum terdapat konsensus nilai rerata VPW yang dipakai secara global, sehingga penggunaan nilai rerata VPW dari penelitian sebelumnya terhadap populasi diluar populasi penelitian tersebut mungkin tidak relavan. Di Indonesia khususnya di Rumah Sakit Cipto Mangunkusumo belum terdapat data dasar nilai rerata VPW.

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Tujuan Penelitian: Mengetahui rerata nilai VPW dewasa normal Indonesia

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Desain Penelitian: Retrospektif potong lintang

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Metode: Pengukuran jarak antara tepi terluar arteri subklavia kiri dengan tepi terluar vena kava superior yang melewati bronkus utama kanan (VPW), pengukuran rasio VPW terhadap diameter jantung terluas dan rasio VPW terhadap diameter terluas rongga toraks. Pengukuran dilakukan pada radiografi toraks PA dari 104 subyek normal yang terdiri dari 52 laki-laki dan 52 perempuan, dihitung rerata dan standar deviasi. Pengukuran serupa juga dilakukan pada topogram CT scan toraks (radiografi toraks AP supine) dan CT scan toraks dari 103 subyek yang terdiri dari 51 laki-laki dan 52 perempuan.

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Hasil: Pada pemeriksaan toraks PA didapatkan rerata VPW  $48,0 \text{ mm} \pm 5,5 \text{ mm}$ , rerata VPCR  $40,3\% \pm 4,6 \%$ , dan rerata VPTR  $17,2\% \pm 1,7\%$ . Pada pemeriksaan topogram CT scan didapatkan rerata VPW  $50,3 \text{ mm} \pm 6,2 \text{ mm}$ , rerata VPTR  $45\% \pm 5,1\%$ , dan rerata VPTR  $19,8\% \pm 2,5\%$ . Rerata VPW pada CT scan toraks  $50,4 \pm 6,1 \text{ mm}$ . Pengukuran pada foto toraks AP sekitar 10 % lebih besar dibandingkan pada foto toraks PA, dan pengukuranVPW pada foto toraks terbukti memiliki akurasi yang tinggi.

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Kesimpulan: Rerata VPW pada pemeriksaan foto toraks PA tegak dewasa normal Indonesia adalah  $48 \pm 5,5 \text{ mm}$ , ternyata tidak berbeda bermakna dengan rerata VPW pada populasi barat ( $48 \pm 5 \text{ mm}$ ). Rerata VPCR pada foto toraks PA

adalah 40,3 % ± 4,6 % dan VPTR adalah 17,2 % ± 1,7 %.

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<b>ABSTRACT</b><br>

Background: Vascular pedicle width (VPW) is the distance, from a perpendicular line at the takeoff point of the left subclavian artery off the aorta to the point at which the superior vena cava. Measurement of VPW on chest x-ray is relatively non-invasive, fast and easy technique as hypervolemia predictor, but no worldwide consensus has been proposed.

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Objective: to investigate mean vascular pedicle width of Indonesian adult

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Study design: Retrospective cross sectional

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Methods : VPW is the distance, measure in millimeters, from a perpendicular line at the takeoff point of the left subclavian artery to the point at which the superior vena cava crosses the right main bronchus, than calculate VPW ratio to a widest horizontal diameter of cardiac dan thoracic wall.

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Results : Data from 104 PA chest x-ray of normal subjects and 103 thoracic CT scan of selected subjects. On PA chest x-ray obtained mean VPW 48,0 mm ± 5.5 mm, mean VPCR 40.3% ± 4.6%, and mean VPTR 17.2% ± 1.7%. On CT scan topogram obtained mean VPW 50,3 mm ± 6.2 mm, mean VPTR 45% ± 5.1%, and mean VPTR 19.8% ± 2.5%. On thoracic CT scan obtained mean VPW 50.4 ± 6.1 mm. Measurements on the AP chest x-ray about 10% greater than in the PA chest x-ray, and measurement of VPW on conventional chest x-ray aproved to have high accuracy.

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Conclusions :The mean VPW on erect chest x-ray of Indonesian adult is 48 ± 5,5

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